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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,660	02/09/2004 Xiaohe Chen		200300677-1	1438
	7590 11/13/200 CKARD COMPANY	EXAMINER		
	perty Administration	NILAND, PATRICK DENNIS		
3404 E. Harmoi Mail Stop 35	ny Koau	ART UNIT	PAPER NUMBER	
FORT COLLIN	IS, CO 80528	1796		
		NOTIFICATION DATE	DELIVERY MODE	
		11/13/2009	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM ipa.mail@hp.com laura.m.clark@hp.com

Office Action Summary		Applica	tion No.	Applicant(s)			
		10/775,	660	CHEN ET AL.			
		Examin	er	Art Unit			
		Patrick I	D. Niland	1796			
 Period for	The MAILING DATE of this commun	ication appears on t	he cover sheet with the	correspondence a	ddress		
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).							
Status							
2a)⊠ T 3)□ S	desponsive to communication(s) file this action is FINAL . Since this application is in condition losed in accordance with the practi	2b)⊡ This action is for allowance exce∣	ot for formal matters, p		e merits is		
Dispositio	n of Claims						
4a 5)□ C 6)⊠ C 7)□ C 8)□ C		re withdrawn from o					
 9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. 							
Priority un	der 35 U.S.C. § 119						
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 							
2) Notice of 3) Informa	of References Cited (PTO-892) of Draftsperson's Patent Drawing Review (Fition Disclosure Statement(s) (PTO/SB/08) Io(s)/Mail Date	PTO-948)	4) Interview Summa Paper No(s)/Mail 5) Notice of Informal 6) Other:				

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1. The amendment of 7/17/09 has been entered. Claims 1-25 are pending.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
- 4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claims 1-10 and 13-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. Application Publication 2004/0035319 Yeh et al. in view of WO 03/097753 as interpreted by US Pat. Application Publication US 2004/0242726 Waki et al..

Yeh discloses an inkjet ink containing self dispersing pigment in the instantly claimed amount, the instantly claimed amount of 1,2-alkyldiol, and polyurethane. The amount of polyurethane is not disclosed. The polyurethane is not disclosed as being insoluble or soluble in water. The disclosure of polyurethane per se is taken as encompassing both since there are only two options for water solubility. Furthermore, it is noted that the instantly claimed limit for water solubility encompasses very low solubilities in water.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the instantly claimed amounts of water soluble polyurethane as the polyurethane of Yeh because the instantly claimed amounts would be required to give the low viscosities and surface tensions required of inkjet inks, Waki shows water soluble polyurethanes in the instantly claimed amounts to be useful as binders in ink jet inks at sections[0056]-[0057], [0058]-[0066], the amount being disclosed in section [0067] of Waki, which includes the polyurethanes of the instant claims 1, 3-5, and 21-24, water soluble polyurethanes clearly require no additional surfactant and thereby eliminate the well known harmful effects of such surfactants, such as decreased adhesion and discoloration, and the properties resulting from the water solubility and amounts of the polyurethanes of Waki would have been expected in the inks of Yeh. See Yeh, the abstract, sections [0002], [0016]-[0030], [0046], [0059], which falls within the scope of the instant claim 8, [0060]-[0061], which falls within the scope of the instant claim 9, [0063] of which "may" indicates that surfactants are not required which falls within the scope

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of the instant claim 17, [0066], [0068], and [0069], which falls within the scope of the instantly claimed 1,2-alkydiols and the amounts thereof of the instant claims 1, 2, 6-7, and 25, [0071], which discloses polyurethanes generally, [0073], which falls within the scope of the instant claims 13-14,

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the instantly claimed pHs of the instant claims 15-16 to maintain the acid groups of the pigment of Yeh and the polyurethanes of Waki neutralized so as to maintain dispersion stability thereof in aqueous media and to avoid damaging high alkaline conditions simultaneously.

Yeh does not disclose the solvent of the instant claim 10.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the instantly claimed solvents of the instant claim 10 in Yeh because Yeh discloses the use of cosolvents generally, Waki teaches the use of such solvents at paragraphs [0076]-[0077] and the benefits thereof would have been expected in the inks of Yeh.

The inkjet printing of the above discussed composition according to the methods of Yeh falls within the scope of the instant claims 18-19. The ink is necessarily in a cartridge of the instant claim 20.

The 131 affidavit filed on 7/17/09 under 37 CFR 1.131 has been considered but is ineffective to overcome the Yeh et al. reference.

The applicant's Affidavit under 37 CFR 1.131 of 7/17/09 has been fully considered. The examiner particularly notes therein: "IV. Attached Exhibit 1 is a copy of pages from my (George Sarkisian) laboratory notebook describing our invention as defined in claim 1 of the

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above-identified application, dated prior to May 29, 2003. The ink formulations shown in Exhibit 1 are identified by reference numbers 4229, 4230, and 4231. Each of these ink formulations include a self-dispersed pigment (IJX 600-1,6575-65), 1,2-alkyldiol (1,2-hexanediol); and a single polyurethane resin (nbz 3570/60)."

The examiner notes MPEP 715, particularly "where the reference has a <u>prior art date</u> under 35 U.S.C. 102(e) prior to applicant 's effective filing date, and shows but does not claim the same patentable invention. See MPEP § 715.05 for a discussion of "same patentable invention." See MPEP § 706.02(a) and § 2136 through § 2136.03 for an explanation of what references qualify as prior art under 35 U.S.C. 102(e)." and "III. REFERENCE DATE TO BE OVERCOME The date to be overcome under 37 CFR 1.131 is the effective date of the reference (i.e., the date on which the reference is available as prior art)."

See MPEP 21 2136.03 [R-6] Critical Reference Date, particularly "III. PRIORITY FROM PROVISIONAL APPLICATION UNDER 35 U.S.C. 119(e)

The 35 U.S.C. 102(e) critical reference date of a U.S. patent or U.S. application publications and certain international application publications entitled to the benefit of the filing date of a provisional application under 35 U.S.C. 119(e) is the filing date of the provisional application with certain exceptions if the provisional application(s) properly supports the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph. See MPEP § 706.02(f)(1), examples 5 to 9. Note that international applications which (1) were filed prior to November 29, 2000, or (2) did not designate the U.S., or (3) were not published in English under PCT Article 21(2) by

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WIPO, may not be used to reach back (bridge) to an earlier filing date through a priority or benefit claim for prior art purposes under 35 U.S.C. 102(e)." Therefore, Yeh et al. is entitled to the Provisional application filing date of 6/6/02, which the instant 131 affidavit does not swear behind. The prior art date of Yeh et al. is 6/6/02. The applicant does not swear behind this date. The applicants' 131 affidavit is not persuasive for this reason.

See 715.02 [R-6] How Much of the Claimed Invention Must Be Shown, Including the General Rule as to Generic Claims, particularly "Note, however, where the differences between the claimed invention and the disclosure of the reference(s) are so small as to render the claims obvious over the reference(s), an affidavit or declaration under 37 CFR 1.131 is required to show no more than the reference shows. In re Stryker, 435 F.2d 1340, 168 USPQ 372 (CCPA 1971). In other words, where the examiner, in rejecting a claim under 35 U.S.C. 103, has treated a claim limitation as being an obvious feature or modification of the disclosure of the reference(s) relied upon, without citation of a reference which teaches such feature or modification, a 37 CFR 1.131 affidavit or declaration may be sufficient to overcome the rejection even if it does not show such feature or modification.

Further, a 37 CFR 1.131 affidavit is not insufficient merely because it does not show the identical disclosure of the reference(s) or the identical subject matter involved in the activity relied upon. If the affidavit contains facts showing a completion of the invention commensurate with the extent of the invention as claimed is shown in the reference or activity, the affidavit or declaration is sufficient, whether or not it is a showing of the identical disclosure of the reference or the identical subject matter involved in the activity.

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See In re Wakefield, 422 F.2d 897, 164 USPQ 636 (CCPA 1970)."

See MPEP 715.03 [R-2] Genus-Species, Practice Relative to Cases Where Predictability Is in Question and note MPEP 715.02 " See, however, MPEP § 715.03 for practice relative to cases in unpredictable arts."

The applicant's declaration shows only a single species of polyurethane. The cited prior art reads on the entire genus thereof. It is not seen that all of the polyurethanes covered by the prior art are rendered obvious by the single species of the applicant's 131 affidavit. The applicant's 131 affidavit is therefore not commensurate in scope with the cited prior art and the instant claims. The applicant's 131 affidavit therefore does not meet the implicit requirement of MPEP 715.03 "The test is whether the facts set out in the affidavit are such as would persuade one skilled in the art that the applicant possessed so much of the invention as is shown in the reference. In re Schaub, 537 F. 509, 190 USPQ 324 (CCPA 1976)."

Chemistry is an unpredictable art. It is not seen that the species of the applicants' 131 affidavit that all of the polyurethanes encompassed by the instant claims and the cited prior art are rendered obvious by the single species of the applicant's 131 affidavit. It is not seen that the applicant's 131 affidavit "contains facts showing a completion of the invention that is commensurate with the extent of the invention as claimed as is shown in the Yeh et al. reference.

See MPEP 715.07(a) Diligence, particularly "Where conception occurs prior to the date of the reference, but reduction to practice is afterward, it is not enough merely to allege that applicant or patent owner had been diligent. Ex parte Hunter, 1889 C.D. 218, 49 O.G. 733 (Comm'r Pat. 1889). Rather, applicant must show evidence of facts establishing diligence."

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The applicant's arguments have been fully considered but are not persuasive in view of the above statements and the teachings of the cited prior art. This rejection is therefore maintained.

6. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. Application Publication 2004/0035319 Yeh et al. in view of WO 03/097753 as interpreted by US Pat. Application Publication US 2004/0242726 Waki et al. as applied to claims 1-9 and 13-25 in paragraph 8 above and further in view of Iu et al. (U.S. 6,102,998).

Yeh discloses an inkjet ink containing self dispersing pigment in the instantly claimed amount, the instantly claimed amount of 1,2-alkyldiol, and polyurethane. The amount of polyurethane is not disclosed. The polyurethane is not disclosed as being insoluble or soluble in water. The disclosure of polyurethane per se is taken as encompassing both since there are only two options for water solubility. Furthermore, it is noted that the instantly claimed limit for water solubility encompasses very low solubilities in water.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the instantly claimed amounts of water soluble polyurethane as the polyurethane of Yeh because the instantly claimed amounts would be required to give the low viscosities and surface tensions required of inkjet inks, Waki shows water soluble polyurethanes in the instantly claimed amounts to be useful as binders in ink jet inks at sections[0056]-[0057], [0058]-[0066], the amount being disclosed in section [0067] of Waki, which includes the polyurethanes of the instant claims 1, 3-5, and 21-24, water soluble polyurethanes clearly require no additional surfactant and thereby eliminate the well known harmful effects of such surfactants, such as decreased adhesion and discoloration, and the properties resulting from the water solubility and amounts of the polyurethanes of Waki would have been expected in the inks

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of Yeh. See Yeh, the abstract, sections [0002], [0016]-[0030], [0046], [0059], which falls within the scope of the instant claim 8, [0060]-[0061], which falls within the scope of the instant claim 9, [0063] of which "may" indicates that surfactants are not required which falls within the scope of the instant claim 17, [0066], [0068], and [0069], which falls within the scope of the instantly claimed 1,2-alkydiols and the amounts thereof of the instant claims 1, 2, 6-7, and 25, [0071], which discloses polyurethanes generally, [0073], which falls within the scope of the instant claims 13-14,

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the instantly claimed pHs of the instant claims 15-16 to maintain the acid groups of the pigment of Yeh and the polyurethanes of Waki neutralized so as to maintain dispersion stability thereof in aqueous media and to avoid damaging high alkaline conditions simultaneously.

Yeh does not disclose the solvent of the instant claim 10.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the instantly claimed solvents of the instant claim 10 in Yeh because Yeh discloses the use of cosolvents generally, Waki teaches the use of such solvents at paragraphs [0076]-[0077] and the benefits thereof would have been expected in the inks of Yeh.

The inkjet printing of the above discussed composition according to the methods of Yeh falls within the scope of the instant claims 18-19. The ink is necessarily in a cartridge of the instant claim 20.

Waki and Yeh do not disclose the solvents of the instant claims 11-12.

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It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the instantly claimed solvents of the instant claims 10-12 in the above discussed inks of Yeh and Waki because Iu et al., which is drawn to ink jet ink, disclose the use of hydantoin solvents identical to that presently claimed in order to produce ink with enhanced image quality, waterfastness, and dry time (col.4, lines41-65 and col.9, lines 20-24) and such cosolvents are encompassed by Yeh.

The evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the Yeh et al. reference to either a constructive reduction to practice or an actual reduction to practice. There is no evidence of diligence in the applicant's 131 affidavit.

The 131 affidavit filed on 7/17/09 under 37 CFR 1.131 has been considered but is ineffective to overcome the Yeh et al. reference.

The applicant's Affidavit under 37 CFR 1.131 of 7/17/09 has been fully considered. The examiner particularly notes therein: "IV. Attached Exhibit 1 is a copy of pages from my (George Sarkisian) laboratory notebook describing our invention as defined in claim 1 of the above-identified application, dated prior to May 29, 2003. The ink formulations shown in Exhibit 1 are identified by reference numbers 4229, 4230, and 4231. Each of these ink formulations include a self-dispersed pigment (IJX 600-1,6575-65), 1,2-alkyldiol (1,2-hexanediol); and a single polyurethane resin (nbz 3570/60)."

The examiner notes MPEP 715, particularly "where the reference has a <u>prior art date</u> under 35 U.S.C. 102(e) prior to applicant 's effective filing date, and shows but does not claim the same

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patentable invention. See MPEP § 715.05 for a discussion of "same patentable invention." See MPEP § 706.02(a) and § 2136 through § 2136.03 for an explanation of what references qualify as prior art under 35 U.S.C. 102(e)." and "III. REFERENCE DATE TO BE OVERCOME The date to be overcome under 37 CFR 1.131 is the effective date of the reference (i.e., the date on which the reference is available as prior art)."

See MPEP 21 2136.03 [R-6] Critical Reference Date, particularly "III. PRIORITY FROM PROVISIONAL APPLICATION UNDER 35 U.S.C. 119(e)

The 35 U.S.C. 102(e) critical reference date of a U.S. patent or U.S. application publications and certain international application publications entitled to the benefit of the filing date of a provisional application under 35 U.S.C. 119(e) is the filing date of the provisional application with certain exceptions if the provisional application(s) properly supports the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph. See MPEP § 706.02(f)(1), examples 5 to 9. Note that international applications which (1) were filed prior to November 29, 2000, or (2) did not designate the U.S., or (3) were not published in English under PCT Article 21(2) by WIPO, may not be used to reach back (bridge) to an earlier filing date through a priority or benefit claim for prior art purposes under 35 U.S.C. 102(e)." Therefore, Yeh et al. is entitled to the Provisional application filing date of 6/6/02, which the instant 131 affidavit does not swear behind. The prior art date of Yeh et al. is 6/6/02. The applicant does not swear behind this date.

See 715.02 [R-6] How Much of the Claimed Invention Must Be Shown, Including the General Rule as to Generic Claims, particularly "Note, however, where the differences

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between the claimed invention and the disclosure of the reference(s) are so small as to render the claims obvious over the reference(s), an affidavit or declaration under 37 CFR 1.131 is required to show no more than the reference shows. In re Stryker, 435 F.2d 1340, 168 USPQ 372 (CCPA 1971). In other words, where the examiner, in rejecting a claim under 35 U.S.C. 103, has treated a claim limitation as being an obvious feature or modification of the disclosure of the reference(s) relied upon, without citation of a reference which teaches such feature or modification, a 37 CFR 1.131 affidavit or declaration may be sufficient to overcome the rejection even if it does not show such feature or modification.

Further, a 37 CFR 1.131 affidavit is not insufficient merely because it does not show the identical disclosure of the reference(s) or the identical subject matter involved in the activity relied upon. If the affidavit contains facts showing a completion of the invention commensurate with the extent of the invention as claimed is shown in the reference or activity, the affidavit or declaration is sufficient, whether or not it is a showing of the identical disclosure of the reference or the identical subject matter involved in the activity. See In re Wakefield, 422 F.2d 897, 164 USPO 636 (CCPA 1970)."

See MPEP 715.03 [R-2] Genus-Species, Practice Relative to Cases Where Predictability Is in Question and note MPEP 715.02 " See, however, MPEP § 715.03 for practice relative to cases in unpredictable arts."

The applicant's declaration shows only a single species of polyurethane. The cited prior art reads on the entire genus thereof. It is not seen that all of the polyurethanes covered by the prior art are rendered obvious by the single species of the applicant's 131 affidavit. The applicant's

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131 affidavit is therefore not commensurate in scope with the cited prior art and the instant claims. The applicant's 131 affidavit therefore does not meet the implicit requirement of MPEP 715.03 "The test is whether the facts set out in the affidavit are such as would persuade one skilled in the art that the applicant possessed so much of the invention as is shown in the reference. In re Schaub, 537 F. 509, 190 USPQ 324 (CCPA 1976)."

Chemistry is an unpredictable art. It is not seen that the species of the applicants' 131 affidavit that all of the polyurethanes encompassed by the instant claims and the cited prior art are rendered obvious by the single species of the applicant's 131 affidavit. It is not seen that the applicant's 131 affidavit "contains facts showing a completion of the invention that is commensurate with the extent of the invention as claimed as is shown in the Yeh et al. reference.

See MPEP 715.07(a) Diligence, particularly "Where conception occurs prior to the date of the reference, but reduction to practice is afterward, it is not enough merely to allege that applicant or patent owner had been diligent. Ex parte Hunter, 1889 C.D. 218, 49 O.G. 733 (Comm'r Pat. 1889). Rather, applicant must show evidence of facts establishing diligence."

The applicant's arguments have been fully considered but are not persuasive in view of the above statements and the teachings of the cited prior art. This rejection is therefore maintained.

7. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Friday from 10-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrick D Niland/ Primary Examiner Art Unit 1796